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71 Applicant: **SANKEI PHARMACEUTICAL
COMPANY LIMITED**
2, Kanda-Mikura-cho
Chiyoda-Ku Tokyo(JP)

**Applicant: NIPPON PHARMACEUTICAL
DEVELOPMENT INSTITUTE COMPANY
LIMITED**
3-25, Hanazono-cho Mukawa-machi

Yuufutsu-gun Hokkaido(JP)

(72) Inventor: Furlenmeier, André, Dr.
119 Wettsteinallee
CH-4058 Basle(CH)

Inventor: Götschi, Erwin, Dr.
23 Landhofweg
CH-4153 Reinach(CH)

Inventor: Hebeisen, Paul, Dr.
52 Klusweg

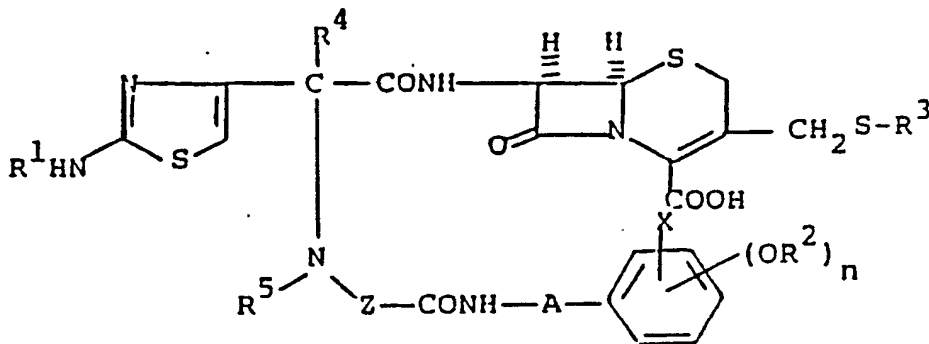
CH-4153 Reinach(CH)
Inventor: **Hofheinz, Werner, Dr.**
7 Talmattweg

CH-4103 Bottmingen(CH)
Inventor: Link, Helmut, Dr.
70 Dammerkirkstrasse
CH-4056 Basle(CH)

74 Representative: **Lederer, Franz, Dr. et al**
Patentanwalt Dr. Franz Lederer
Lucile-Grahn-Strasse 22
D-8000 München 80(DE)

⑤4 3-Heterocyclylthiomethyl cephalosporins.

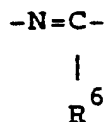
(57) Acyl derivatives of the general formula



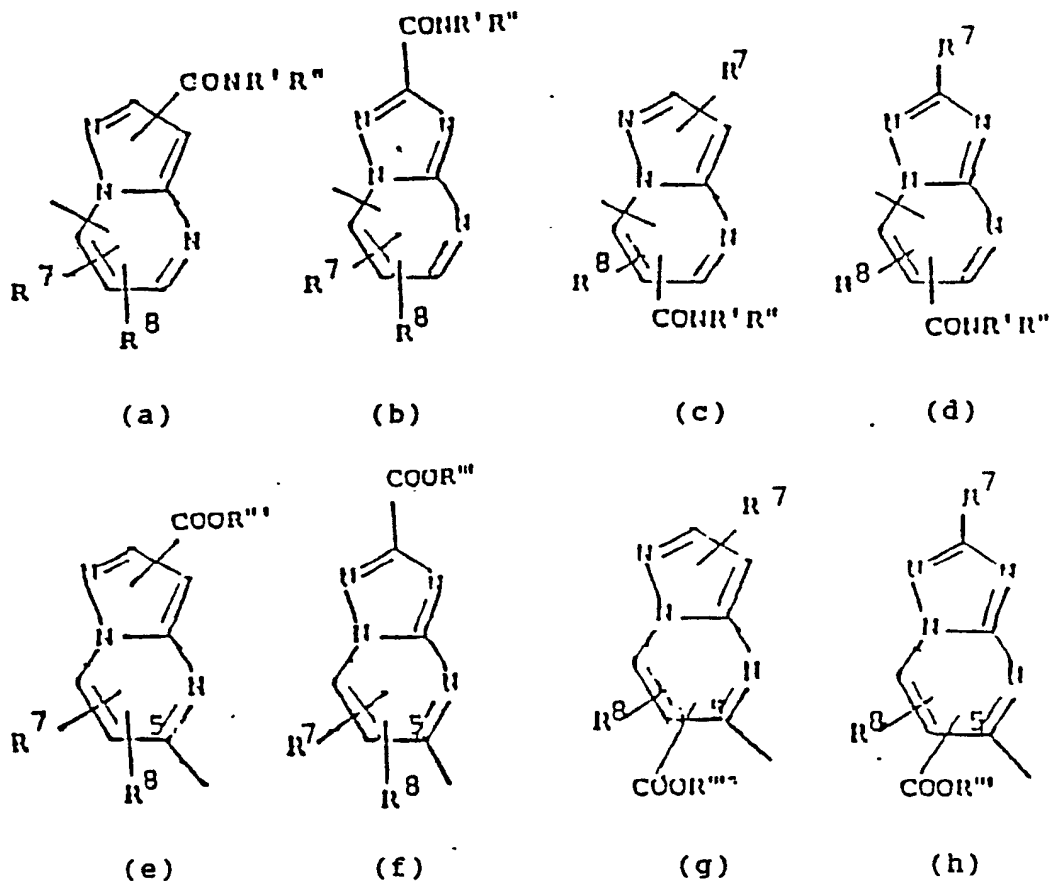
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in which A signifies a group of the general formulae

-NHCO-, -NHCONHCO-, -NHCOCH=CH-,



wherein R^6 represents hydrogen or lower alkyl; R^1 and R^2 in each case signify hydrogen or a protecting group, X signifies hydrogen, halogen, lower alkoxy, nitro or an additional group $-\text{OR}^2$, n signifies the number 1 or 2, R^4 and R^5 both signify hydrogen or together signify an additional bond and Z signifies a direct bond or carbonyl (where R^4 and R^5 both represent hydrogen) or a group of the formula $-\text{O-B-}$ (where R^4 and R^5 together represent an additional bond) in which B signifies straight-chain, branched or cyclic lower alkylene; and wherein further R^3 signifies a substituted bicyclic group of the general formulae



in which R^7 and R^8 each individually represent hydrogen, lower alkyl or trifluoromethyl or (in formulae (a), (b), (e) and (f)) together represent alkylene with 3 or 4 carbon atoms and R' , R'' and R''' each individually represent hydrogen, lower alkyl or lower cycloalkyl; whereby compounds of formula I in which R^4 and R^5 together represent an additional bond are present in the syn-isomeric form or as a mixture with the anti-isomeric form in which the syn-isomeric form predominates,

as well as readily hydrolyzable esters and salts of these compounds and hydrates of the compounds of formula I or of their esters and salts.

The compounds have antibiotic activity.



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EUROPEAN SEARCH REPORT

Application Number

EP 88 10 5733

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
Y	EP-A-0 189 287 (NIPPON PHARMACEUTICAL DEVELOPMENT INSTITUTE CO., LTD) * Page 0; pages 119-127; claims * ---	1-35	C 07 D 501/36 A 61 K 31/545
Y	EP-A-0 150 507 (MOCHIDA) * Page 0; pages 177-221: claims * ---	1-35	
P,A	EP-A-0 254 495 (SANKEI PHARMACEUTICAL CO., LTD) * Pages 50-63: claims * -----	1-35	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			C 07 D 501/00
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 01-08-1990	Examiner LUYTEN H.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			